



From the Patron

REORIENTING AGRICULTURAL DEVELOPMENT IN INDIA TO THE CLIMATE - SMART WAY

Climate Smart Agriculture (CSA), concept introduced by the Food and Agriculture Organization in 2009 has developed into a new farming approach with the launch of Global Alliance on climate smart agriculture in the 2014 UN Climate Summit. Thereafter, many countries have started promoting CSA as a strategy for achieving sustainable agricultural development when their farmlands started to get challenged with low productivity and profitability due to changing climate. In fact, a major shift in the technology adoption was necessary to make these farmlands more durable. Technological backup of CSA consists of a group of 'good agricultural practices' taken from the precision agriculture, conservation agriculture and some other eco-friendly agriculture models. CSA approach does not recommend specific set of universally applicable production technologies but, advises site specific selection of technologies.

As the input intensive agriculture development models adopted by a vast majority of farmers in India are advancing towards some serious irreversible environmental degradation processes that may pose serious challenges to resilience of the land-based livelihoods to external shocks in the near future, the best possible way out of survival is to adopt strategies like CSA to enable these production systems withstand the unanticipated stress conditions. This can be done either through modifying/changing the unsustainable farm management practices or by adopting new practices. However, transforming farmlands to climate smart is not an easy task as long as the key stakeholders of agriculture like farmers, researchers, government agencies, marketing agencies etc. do not work together under a single platform. Because, execution of CSA approach starts with identification of finest technologies that can respond best to changing climate, under varying resource base of farmlands. Here, the intervention may be a change in the irrigation system or land configuration to enhance water use efficiency, modification in the nutrient use or its mode of application to improve nutrient use efficiency, alteration in the crop intensification pattern, a new marketing strategy to increase net farm income, and in some other cases a combination of different technologies. Technique developed by the International Fertilizer Development Centre



Dr. ASHOK K PATRA
DIRECTOR

ICAR-Indian Institute of Soil Science

to reduce nitrogen loss and improve fertilizer use efficiency in the rice systems i.e., placement of 1-3 g sized urea briquette 7-10 cm deep in the soil after the transplantation of seedlings is a best example of increasing resource efficiency by changing its mode of application. Moreover, such technique has the added advantage on reducing nitrate contamination of ground water and methane emission from rice systems.

In short, success of this farming approach in any production system lies in the tactics adopted by the stakeholders in effectively dealing the intertwined challenges before the agri-food systems i.e., attaining farm productivity and profitability increase through efficient resource use under changing climate along with contributing to the process of climate change mitigation.

Ashok K Patra